

REMARKS

The present Amendment amends claim 1, 3, 5-10 and 17, leaves claims 16 and 18 unchanged and cancels claims 2, 4 and 11-15. Therefore, the present application has pending claims 1, 3, 5-10 and 16-18.

In paragraph 4 of the Office Action the Examiner states that references JP-A-7-21907 and JP-A-8-179878 have not been considered being that the references were not listed on a Form PTO-1449 to permit initialing by the Examiner. Attached herewith is a Form PTO-1449 which lists the above noted references. An indication that the references have been considered by initialing a copy of the attached Form PTO-1449 is respectfully requested.

In paragraph 6 of the Office Action the Examiner states that the drawings stand objected to due to informalities, particularly not showing Figs. 7a and 7b as described in the specification. Filed on even date herewith are Proposed Drawing Corrections properly noting Figs. 7a and 7b as described in the specification. Therefore, this objection is overcome and should be withdrawn.

The disclosure stands objected to in paragraph 7 of the Office Action being that the Examiner states that the specification refers to a single Fig. 7 in one instance and refers to Figs. 7a and 7b in another instance. Amendments were made to the specification to make all references therein to Figs. 7a and 7b. Entry of this amendment is respectfully requested.

In paragraph 11 of the Office Action, the Examiner indicated that claims 5-10 and 16-18 would be allowable if rewritten or amended to be in independent form including all the limitations of the base claim and any intervening claims.

In accordance with the above, claim 5 was amended to be in independent form including all the limitations of the base claim 1 and intervening claim 4. Therefore, claim 5 is allowable as indicated by the Examiner. Since claims 6-10 and 16-18 each depend either directly or indirectly on claim 5, these claims are also now in condition for allowance. Therefore, an indication that claims 5-10 and 16-18 are allowable is respectfully requested.

Claims 1-4, 11 and 12 stand rejected under 35 USC §102(e) as being anticipated by Bjorn (WO 00/16244); and claims 1-4, 11 and 12 stand rejected under 35 USC §102(e) as being anticipated by Sayag (U.S. Patent No. 6,166,370). As indicated above, claims 2, 4, 11 and 12 were canceled. Therefore, these rejections with respect to claims 2, 4, 11 and 12 is rendered moot. These rejections with respect to the remaining claims 1 and 3 are traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 1 and 3 are not taught or suggested by Bjorn or Sayag whether taken individually or in combination with any of the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to claims 1 and 3 so as to more clearly describe features of the present invention. Particularly, amendments were made to claims 1 and 3 to more clearly describe that the present invention is directed to a pointing device for moving a pointer shown on a display screen including a transparent plate capable of pushing operation and having an outer surface which permits contact by a surface of an object, at least one operation switch that operates according to the pushing operation of the transparent plate, image detecting means for detecting an

image of the surface of the objects that contact the outer surface of the transparent plate, optical means for forming an image on the outer surface of the transparent plate on a detection plate of the image detecting means, light emitting means for emitting light into the outer surface of the transparent plate and control means for detecting a change in the image detected by the image detecting means for moving the pointer in a direction according to the detected change of the image, wherein the at least one operation switch is configured to be able to activate an operation in accordance with the pushing operation of the transparent plate.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Bjorn or Sayag whether taken individually or in combination with any of the other references of record.

Bjorn discloses a fingerprint platform 130 including a sheet-like prism, illumination source 135, lens 150 and detection array 110. In Bjorn, when a finger contacts the detecting surface 145 of fingerprint platform 130, then the illumination light from illumination source 135 is reflected at the fingertip, and the image of the fingerprint is detected by detecting array 110 through lens 150. See page 23, lines 11 to 23 of Bjorn. Further, in Bjorn, the fingerprint image detected by the detection array 110 is supplied to processing apparatus 105, and in the event the fingerprint image is the fingerprint image of a fingertip, then it works as pointer control apparatus. See page 13, lines 19 to 30 of Bjorn.

As per Bjorn, while operating as the pointer control apparatus, cursor control function is carried out and the position of fingerprint image on detecting surface of detecting array 110 is detected. See page 14, lines 23 to 30 of Bjorn. Accordingly,

in Bjorn the position on the detecting surface of detecting array 110 and the position on interface display apparatus 125 are coordinated into a one-to-one relation, to permit the fingertip position on the detecting surface of detecting array 110 to be judged. Therefore, in Bjorn, in accordance with a change of the position, a cursor icon or pointer is moved so as to display in the corresponding position on interface display apparatus 125. See page 15, lines 1 to 12 of Bjorn.

The above described teachings of Bjorn do not anticipate nor render obvious the features of the present invention as now more clearly recited in claims 1 and 3. For example, the plate of the present invention, as now recited in the claims, is not only contacting the object (pointer control) but also capable of pushing operation (determining operation). Furthermore, according to the present invention, since the invention simply requires detection of the change of image of an object detected by the image detection means, the size of the pointing device can be reduced.

The plate disclosed in Bjorn is only to contact the object. Therefore, pushing operation as in the present invention cannot be realized. Furthermore, in Bjorn when aligning the position detecting surface 145 of display apparatus 125 in a one-to-one relation, it becomes necessary to provide a photocell on the detecting array 110 corresponding to all positions of the interface display apparatus 125. It further becomes necessary in Bjorn to make fingerprint platform 130 larger, thereby not permitting the size of the pointer control apparatus to be reduced cannot be downsized.

Since Bjorn does not teach or suggest any apparatus which allows for the push operation of the transparent plate of the present invention, it follows that Bjorn

does not teach or suggest that at least one operation switch is provided that operates according to the pushing operation so as to activate an operation as in the present invention. By use of this feature of the present invention, the pointing device can perform multiple functions including the moving of a pointer and a selection operation by the pushing operation of the transparent plate so as to select an image being pointed to by the pointer. Such features are clearly not taught or suggested by Bjorn.

Therefore, Bjorn fails to teach or suggest a transparent plate capable of pushing operation and having an outer surface which permits contact by a surface of an object as recited in the claims.

Further, Bjorn fails to teach or suggest at least one operation switch that operates according to the pushing operation of the transparent plate as recited in the claims.

Still further, Bjorn fails to teach or suggest control means for detecting a change in the image detected by the image detecting means for moving the pointer in a direction according to the detected change of the image as recited in the claims.

Still further yet, Bjorn fails to teach or suggest that the at least one operation switch is configured to be able to activate an operation in accordance with the pushing operation of the transparent plate as recited in the claims.

Thus, as is quite clear from the above, Bjorn fails to teach or suggest numerous features of the present invention as now more clearly recited in the claims. Therefore, reconsideration and withdrawal of the 35 USC §102(b) rejection of claims 1 and 3 as being anticipated by Bjorn is respectfully requested.

Sayag suffers from the same deficiencies relative to the features of the present invention as recited in the claims as Bjorn. Sayag discloses to reflect the size, shape and position of a fingertip contacting region varied in accordance with delicate movement of fingertip on the plate to a change of generation of electric charges in each of light detector (quarter cell optical detector) having four quadrants, and the electric charges are converted into control signal to control movement of pointer on the display screen. See col. 2, lines 41 to 49 of Sayag.

The pointing device as per Sayag includes plate 104, LED 106, lens 108 and detector 110, the electric charges generated in accordance with movement of fingertip 102 in contact region 402 formed between fingertip 102 and plate 104 is detected by each quadrant of the detector 110 to control movement of pointer on the display screen. See col. 5, lines 40 through col. 6, line 40 of Sayag.

The present invention as now more clearly recited in the claims is not taught or suggested by Sayag. According to the present invention as recited in the claims the plate is not only contacting the object (pointer control) but also capable of pushing operation (determining operation). Furthermore, according to the present invention, since the invention simply requires detection of a change of image of an object detected by the image detection means, the size of the pointing device can be reduced.

While the plate disclosed in Sayag is only to contact the object, the same as in Bjorn, it is impossible for Sayag to carry out pushing operation as in the present invention. Furthermore, in Sayag, as shown in Figs. 4a and 4b thereof, in accordance with movement of the fingertip in the contact region overlapped on four

quadrants of the detector, information from electric charges generated at each of the quadrants of the detector are combined to determine the speed and moving direction of pointer on the display. Accordingly, in Sayag when carrying out pointer control, it becomes necessary to detect dimension, shape and position of the contact region in at least one of any four quadrants. Thus, the plate as taught by Sayag must be large to some degree and the size of the pointing device cannot be reduced as in the present invention.

Further, according to the above and similar to Bjorn Sayag does not teach or suggest the at least one operation switch and the control means as now more clearly recited in the claims. As described above, the at least one operation switch operates according to the pushing operation of the transparent plate. Since the transparent plate as taught by Sayag does not perform any pushing operation it follows that Sayag does not teach or suggest providing at least one operation switch that operates in accordance to the pushing operation and that the at least one operation switch is configured to be able to activate an operation in accordance operation of the transparent plate as in the present invention.

Therefore, Sayag fails to teach or suggest a transparent plate capable of pushing operation having an outer surface which permits contact by a surface of an object as recited in the claims.

Further, Sayag fails to teach or suggest at least one operation switch that operates according to the pushing operation of the transparent plate as recited in the claims.

Still further, Sayag fails to teach or suggest control means for detecting a change in the image detected by the image detecting means for moving pointer in a directed according to the detected change of the image as recited in the claims.

Even further, Sayag fails to teach or suggest that the at least one operation switch is configured to be able to activate an operation in accordance with the pushing operation of the transparent plate as recited in the claims.

Thus, as per the above, Sayag fails to teach or suggest numerous features of the present invention as now recited in claims 1 and 3. Therefore, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1 and 3 as being anticipated by Sayag is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-4, 11 and 12.

In view of the foregoing amendments and remarks, Applicants submit that claims 1, 3, 5-10 and 16-18 are in condition for allowance. Accordingly, early allowance of claims 1, 3, 5-10 and 16-18 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (500.40519X00).

Respectfully submitted,

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